

CLAIMS:

1. A switch device having an arrangement wherein an operation portion externally operated and a switch portion are free to be mounted to or dismounted from each other, the switch portion including a first contact and a second contact allowed to be brought into or out of contact with each other,

wherein a removing force externally applied for dismounting said operation portion and said switch portion from each other acts to separate said first contact and said second contact off from each other.

2. A switch device according to Claim 1, wherein said operation portion comprises a pushbutton which, when receiving an operating force externally applied thereto for opening or closing said first contact and said second contact, moves to transmit the operating force to said switch portion thereby effecting said opening or closing of the contacts,

wherein said removing force is applied by turning either one of said operation portion and said switch portion about a moving direction of the pushbutton.

3. A switch device according to Claim 1, wherein either one of said first contact and said second contact is designed to be movable in said switch portion,

wherein said operation portion comprises a pushbutton which, when receiving an operating force externally applied thereto for opening or

closing said first contact and said second contact, moves to transmit the operating force to the movable one of said first contact and said second contact thereby effecting said opening or closing of the contacts, and

wherein the removing force is applied by turning either one of the operation portion and the switch portion about a moving direction of the pushbutton.

4. A switch device according to Claim 2, further comprising converting means for converting said removing force into a force working in the same direction as said operating force and transmitting the resultant force to said switch portion.

5. A switch device according to Claim 3, further comprising converting means for converting said removing force into a force working in the same direction as said operating force and transmitting the resultant force to the movable one of said first contact and said second contact.

6. A switch device according to Claim 4, wherein said converting means is helically engaged with said pushbutton thereby converting said removing force applied by the turning motion into the force working in the same direction as said operating force and transmitting the resultant force to said switch portion.

7. A switch device according to Claim 5, wherein said converting

means is helically engaged with said pushbutton thereby converting said removing force applied by the turning motion into the force working in the same direction as said operating force and transmitting the resultant force to the movable one of said first contact and said second contact.

8. A switch device according to Claim 4, wherein said pushbutton has a substantially cylindrical shape having a center axis extended in the same direction as said operating force,

wherein said converting means comprises: a pushbutton support which is formed in a corresponding shape to that of said pushbutton and in a slightly larger size than that of said pushbutton, and in which said pushbutton is inserted; a projection formed on either one of a circumferential surface of said pushbutton and a circumferential surface of said pushbutton support; and a helical guide formed in the other circumferential surface as inclined relative to said center axis, and

wherein said projection is engaged with said guide thereby converting said removing force into the force working in the same direction as said operating force.

9. A switch device according to Claim 5, wherein said pushbutton has a substantially cylindrical shape having a center axis extended in the same direction as said operating force,

wherein said converting means comprises: a pushbutton support which is formed in a corresponding shape to that of said pushbutton and in

a slightly larger size than that of said pushbutton, and in which said pushbutton is inserted; an axis connecting the movable one of said first contact and said second contact with said pushbutton support; a projection formed on either one of a circumferential surface of said pushbutton and a circumferential surface of said pushbutton support; and a helical guide formed in the other circumferential surface as inclined relative to said center axis, and

wherein said projection is engaged with said guide thereby converting said removing force into the force working in the same direction as said operating force.